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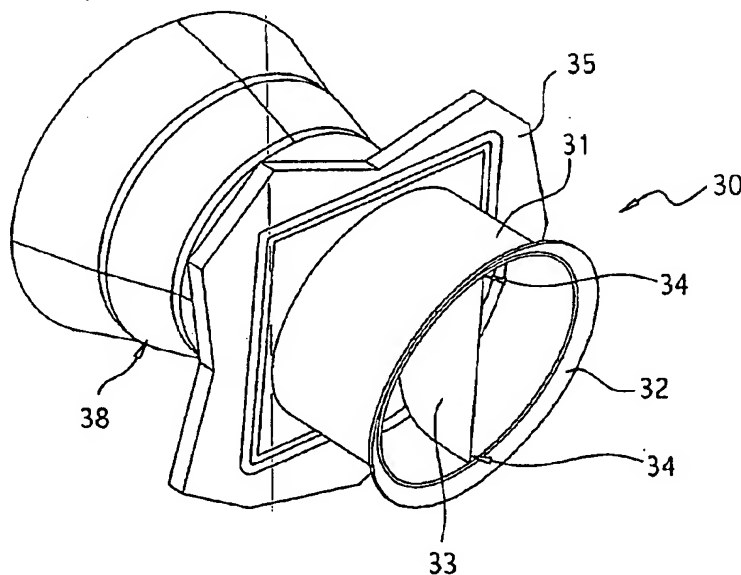
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- (71) Applicant (for all designated States except US): HH TECHNOLOGIES, INC. [US/US]; P.O. Box 99, 1733 County Road 68, Bremen, AL 35033 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): JENKINS, Lesley, Ray [US/US]; 406 Section Line Road, Hanceville, AL 35077 (US). DANIELS, Waymon, Neal [US/US]; 2291 Shiloh Fort Lamar Road, Danielsville, GA 30633 (US).
- (74) Agent: BUSH, Kenneth, M.; Buch Intellectual Property Law Group, LLC, P.O. Box 381146, Birmingham, AL 35238 (US).
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[Continued on next page]

(54) Title: VERTICAL DOOR FAN SHUTTER



(57) Abstract: A fan shutter having one end attachable to an exhaust fan and the opposite inlet end having a pair of vertical doors that are biased to close when the fan is off and to open by the force of vacuum when the fan is on. The use of vertical doors prevents the accumulation of dust and dirt on the doors. The vertical doors pivot horizontally in a housing that may have any desired shape, including a tubular shape with a bell mouth. The tubular bell mouth shutter design further provides improved air flow characteristics and decreased stress on the exhaust fan, compared to conventional fan shutters.

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IPC(7) : F24F 13/04, 13/14, 13/08

US CL : 454/265, 263, 264, 267,

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 454/265, 263, 264, 267,

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
EAST

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|--|-----------------------|
| X          | US 5,277,658 A (GOETTL) 11 January 1994 (11.01.1994), see entire document.         | 1-23                  |
| A          | US 4,649,808 A (WARD et al.) 17 March 1987 (17.03.1987), see entire document.      | 1-23                  |
| A          | US 4,452,391 A (CHOW) 05 June 1984 (05.06.1984), see entire document.              | 1-23                  |
| A          | US 3791279 A (HOLT et al.) 12 February 1974 (12.02.1974), see entire document.     | 1-23                  |

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

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Mail Stop PCT, Attn: ISA/US  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Facsimile No. (703) 305-3230

Authorized officer

Derek S. Boles

Telephone No. 571-272-3700